

Veterinary Practice Management Bulletin

Information Technology for Ambulatory Veterinary Practices

This bulletin explores developments in information technology that can benefit the unique management requirements of the ambulatory veterinarian.

What is different about ambulatory veterinarians?

The obvious ones are:

- most of the work is done on your client's home ground
- the same procedures are commonly repeated for multiple patients in one visit
- technology, medication and supplies are carried with you or stored at a client site (multiple inventory locations)
- in the case of farm or stable clients, there is often a need to share patient information with the client's own record-keeping system
- you typically deal with many different species and need access to information specific to the species you are treating
- typically, support staff are notable by their absence
- you need to record medical notes and charges while at the client's location and either bill immediately or add them to the client's account at the end of the day.
- and the economical environments are less predictable than those of the remainder of the profession.

Dr David Catlin ¹ in April, 2004 DVM Newsmagazine wrote:

“Besides the economic environment, the field of equine veterinary medicine is constantly changing. New medical and surgical techniques, equipment, biologicals and pharmaceuticals surface almost daily. This, combined with an educated clientele and vast amounts of information readily available through the media and the Internet, makes it essential that the equine practitioner stay abreast of the changes in equine practice. “

His conclusions apply equally well to any ambulatory practitioner.

So to summarize, a ambulatory veterinarian is expected to provide the same level of medicine as an office-based veterinarian, but without the same support resources and in a more dynamic and less controllable environment. Not to mention the mud, rain, snow and other less desirable conditions.

However there is some good news.

Information technology is developing at an ever-increasing rate, not only in speed, capability and cost-effectiveness, but also in mobility and connectivity.

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Gone are the days when the only way to have a computerized practice management system, was to come home each night and spend the next few hours trying to reconstruct what you did all day. Remembering every treatment and patient was a task better suited to Alfred Einstein and given the number of interruptions you had, it's unlikely that he could do any better!

But before we look at a solution, let's first define the problems.

What are the Problems in Managing a Ambulatory Practice?

This is not intended to be an exhaustive list of the problems facing the manager of the practice and we're sure that many others can be added.

- The administrative burden in the ambulatory practice is a particularly difficult one, not least because doctors are not usually good record keepers.
- The fact that the doctors are often off-site without any support staff multiplies the problem, as there is no-one there to "nag" them to complete records.
- Knowing where information is and what needs to be done next is even more critical when your support staff are not a few steps away in the next office.
- Keeping track of the visits made, work done, invoices to be raised and outstanding accounts to be chased is, literally, a full-time job.
- If paper-based Patient Medical Records and Client Financial Records are used, where are they located – with the doctor, at the client's location or back in the office?
- How are they updated?
- Now add on to these, most of the problems faced by managers of an office-based practice.
- And all of this is made all the more difficult and time-consuming if inadequate paper-based or computer systems are used.

If we can identify one common theme in all of these problems, it's that the doctor is separated from the facilities and support normally provided by an office-based practice.

To work towards overcoming the problems, we must place the doctor in a "virtual office" environment. Most of us already understand the concept – to provide the doctor with immediate access to information that is needed to create and update patient medical records and client bills. But what will never work, is to expect the doctor to suddenly become a computer and clerical guru.

How can Information Technology Help?

There are three developments that are extremely useful in creating the Virtual Veterinary Office

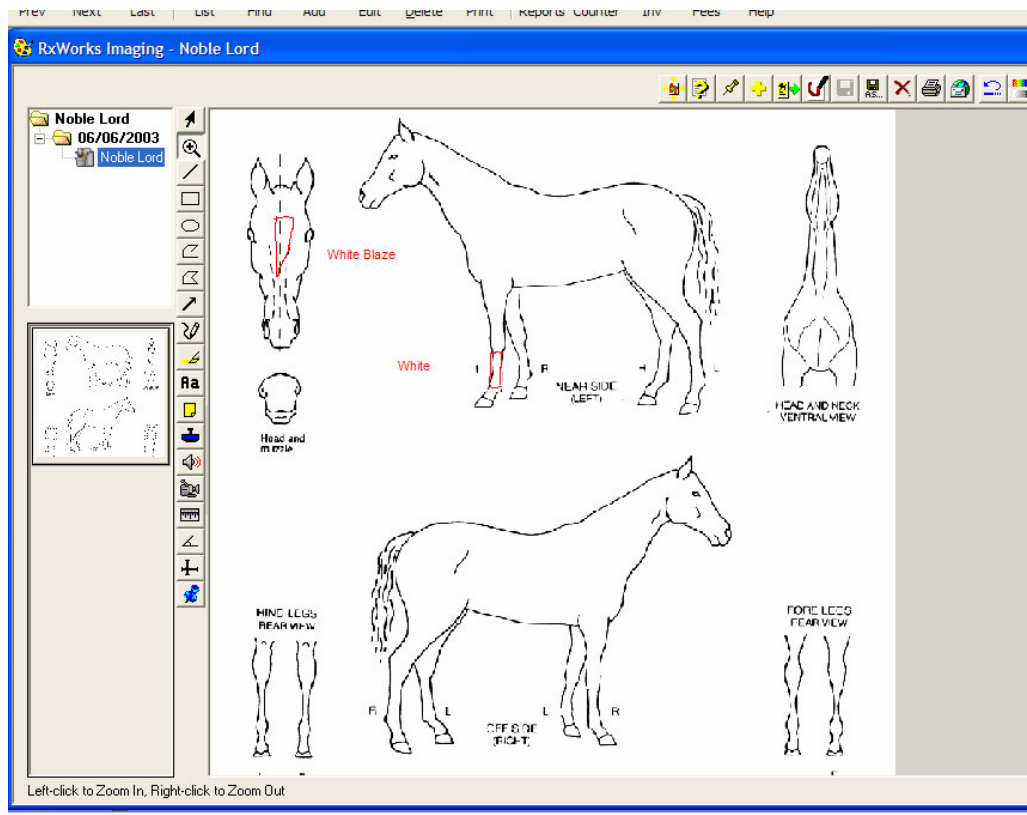
1. Small and lightweight computing devices
2. Touch-screen technology
3. Telecommunication networks

Let's review each in turn and determine how they help ambulatory veterinarians.

Small and Lightweight Computing Devices

Significant developments in Laptop and Tablet PCs provide the screen size, power, storage capacity and speed needed to support a modern practice management system – in a package that is really portable. The costs of these are now within the budget capability of most practices.

The power of the latest Windows operating systems allows the more efficient practice management systems to use image collection, storage and display to simply and quickly record medical charts – thus eliminating the need to have paper-based medical records.



They all have excellent, built-in connectivity tools and fill the role of the main information device needed for the virtual office.

But what about PDAs and Pocket PCs?

These have a place where speed is not critical and there is a limited amount of information needed. Given the extent of data normally required for medical history and accounting records, the lower capability of this type of equipment does not make it very suitable. If all that you wish to do is record charges, then they will do a reasonable job. However, in our opinion, it's an option that does not add much value to the way you practice, your client relationships and increasing your revenues.

Touch-screen Technology

One of the biggest hurdles to using a computer away from the office, is the actual entry of the information. Many of the "more mature" doctors have the same problem as the author, in that we are "keyboard-challenged" and to a lesser extent, "mouse-challenged". Other ways of entering information are needed to make the input task practical.

A pen that is used to "write" on the screen has obvious advantages. If it also carries out the mouse function, it becomes even more useful.

These pens and screens are now included in the Tablet PCs at affordable prices.

The Tablet PC also includes handwriting and voice recognition tools that have made great progress in the past few years. In our experience they are between 80 and 85% effective in translating the written and spoken word into text. The computer "learns" to improve the translation of the writing and voice to text as you work with it. As the software continues to learn and improve, so will its effectiveness. This is certainly a viable tool that has a bright future and worth working with now.

When coupled with a practice management system that includes shortcuts to entering medical notes and charts, the Tablet PC with its pen provide a simple, easy-to-use and above all, speedy means of recording activities.



Telecommunications Networks

Access to networks at reasonable speeds and reliability is now available in most locations in North America. Whether by cellular phone, Wi-Fi, cable TV or land-line, a computer can be attached to a network anywhere. The only limiting factor is the speed of transmission. Obviously Fiber, Digital Subscriber Lines (DSL) and cable offer the top end of speed and cellular, the bottom. But this is really only important if the mobile computer always needs to be connected to the central server in order to record or view history and charges for the patient.

A more effective method of working is the "Store and Forward" approach. This means that work can be carried out on the mobile computer without connecting to the server and then at the end of the day or whenever is convenient, the mobile is connected to the server and the new transactions are downloaded and the patient and client records, updated. Appointments, updates to Client and Patient records can also be uploaded from the server to the mobile at the same time. This allows the doctor to keep the records up-to-date from anywhere, at any time – without having to visit the office.

However the on-line connection does have its uses in the ambulatory veterinarian environment. Retrieving patient or client information for unplanned treatments or accessing veterinary information sites on the internet to get the latest treatment information are just two of the many uses.

What should an Effective Ambulatory Practice Management System look like?

The system must provide the majority of the functions that are found in an office-based system, PLUS it should be simple and quick to use.

If we revisit the differences in a ambulatory practice, we see that we need functions that allow

- stand-alone operation – does not need to be connected to a network
- giving the same treatment to multiple patients in the same visit
- information appropriate for the species we are dealing with. It's pointless asking for information on rabies and other small animal treatments for horses and food animals and vice-versa
- information entry is not restricted solely to a keyboard
- uncomplicated and single step access and update of patient and client information and charges
- ability to transfer selected information to the client's own record keeping system
- transfer of charges, etc to a central practice management system when desired.

We firmly believe that RxWorks Ambulatory coupled with the Tablet PC currently offer the best solution for these requirements.

RxWorks Ambulatory has been developed to take advantage of the extra functionality provided by the Tablet PC. And, equally important, to minimize the problems caused by the limitations of the screen size and keyboard.

This is a sample of the screen used by doctors in their farm or stable visits. It can also be used by small animal practitioners and is particularly useful in the multi-pet households.

All of the patients treated since the last time the charges were transferred to the central system, are shown in the Active Sheets box in the top left corner.

RxWorks' unique Workflow tools are also included to help the doctors manage their activities more efficiently. These are accessed by clicking on the Clipboards button. (For more information on Workflow in the veterinary practice, please refer to our Management Bulletin on Workflow)

By using the "drop-down lists" facility, the doctor is able to select the patient or patients that require treatment, very quickly and simply by pointing the pen. If there were several patients that needed the same treatment, the Duplicate button at the bottom of the screen would be pressed with the pen (or mouse) and the next patient to receive the treatment would be selected. RxWorks will then automatically create the medical record and invoice for each of the horses selected.

In the above example, the doctor has selected Leo the King from the list of patients.

The next step is to create the clinical notes and the charges that belong to the treatment.

We have allowed for several methods of capturing the information that's needed. The choice of the method is left entirely to the doctor's own comfort level.

Each of the methods has built-in shortcuts to speed up the entry of information.

To record the medical notes, handwriting recognition, the handwritten notes themselves, or voice recognition, or the screen keyboard, or attached keyboard can be used. Most of these can take advantage of the RxWorks "type-ahead" function that allows you to enter the first letters of a word or phrase and RxWorks fills in the rest.



The charges are then entered by first selecting the type of Treatment from the box in the upper right corner. A “drop-down” list of all treatments and their charges is displayed for the type of treatment and you select the treatment from that list by pointing at it with the pen or mouse. In the example, we are showing the treatments that are grouped under Vaccinations. That’s it!

But we have a better alternative.

Protocols that are commonly used in the practice can be predefined as Procedures. All of the clinical notes, invoice notes and all individual treatments and charges that are included in the protocol are defined in the Procedure.

When the doctor selects Procedure as the type of Treatment, all of the procedures defined for that doctor are displayed. By selecting the one you want, all of the medical notes, invoice notes and charges are displayed, without any further entry. Changes can then be made if necessary.

This is the most accurate and fastest way of recording treatments available. In most cases the complete medical record and invoice can be created by pointing the pen twice, or with two clicks of the mouse.

At the end of the day or whenever convenient, the ambulatory computer is connected to the home office computer, via modem or directly, and the Synchronize button on the top of the screen is pressed. The ambulatory will then download any charges, clinical notes, etc. to the home computer that have been entered since the last time they were synchronized. Similarly the home computer will upload any new changes, appointments, payments, etc. to the ambulatory computer.

We recognize that this might appear to be a significant change to the historical way of recording patient activities, but it is extremely effective and can add real value to your practice. Missed charges can almost become a sorry memory.

Dr. Catlin summed up the situation perfectly:

“The person who looks forward to, plans for, and even creates change within the practice of equine veterinary medicine will probably be rewarded more professionally and financially than the person who waits to be run over by changes in the profession and scrambles to deal with them.”

Similar techniques are used to create patient charts for identifying location of lesions, identification marks, etc. We use pre-defined chart templates and the drawing tools that are provided by Microsoft to speed up the medical record keeping. Other images, such as photos, and digital files for such as EKG and ultrasound are collected in the same way.

All of these help create the virtual office we discussed earlier. Medical and financial records are always available immediately – no more deciding where to store the paper files and not having access when you need them.

The bond between your client and yourself is further strengthened by having the ability to save them time in entering treatment information into their own system. As you have already captured the information, as long as your client has RxWorks, the data you select can be

automatically transferred. This of course is dependent on connecting both systems together – very easy with the built-in wireless network capability of the Tablet PC.

Summary

The Ambulatory Veterinarian system has two apparently conflicting requirements. It needs to be comprehensive and sophisticated enough to hold medical and financial records as in an office-based system, but simple and quick enough to be practical in field-use.

Information technology is now making that possible with the advent of robust, powerful and relatively inexpensive ambulatory computers. Adding a Practice Management System that has a sophisticated database and full function capabilities, provides the platform for Ambulatory Veterinarians to leap into the Information Age. You can now have the same comprehensive support systems as your office-based compatriots, to help deliver better medicine and increase your value to your clients.

The key factor in all of this is to hide the system complexity from the doctors and let you practice medicine in the most efficient manner possible.

RxWorks does that.

The Ambulatory Veterinarian benefits in many ways by using a system like RxWorks.

- Reduction in number of missed charges – by recording them as they happen. Studies show that at least 10% of charges are missed with an after-the-fact, invoice-driven system. RxWorks is driven by the medical record and checks for missed charges.
- Reduction of time spent each evening or by your spouse or your office personnel in keeping records up-to-date. As well as eliminating confusion and mis-communication over the treatments you gave and what to charge.
- Increased efficiency and reduced time spent on entering clinical notes and charges – with the tools provided by RxWorks.
- Better communication with your client – by having all of the information immediately available.
- More comprehensive and secure medical and accounting records – using the tools provided by RxWorks and Microsoft.
- Improved client compliance - your system will continually remind them and you of the treatments that are due. This is proven by AAHA to significantly increase your revenues and improve client relations.

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